DOCUMENT RESUME

ED 059 973 SP 005 574

AUTHOR Poulos, Nicholis
TITLE Summary, Conclusions, and Recommendations Based on the Evaluation of the Great Cities School Service Assistants Project, Teacher Aides Component.
INSTITUTION Detroit Public Schools, Mich. Dept. of Research and Development.
PUB DATE Nov 71
NOTE 12p.

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS *Academic Achievement; Arithmetic; Educational Improvement; *Paraprofessional School Personnel; *Program Evaluation; Reading Improvement; *Teacher Aides
IDENTIFIERS *Stanford Achievement Test

ABSTRACT

This program was intended to improve the level of educational achievement in the project area through the provision of paraprofessional aides residing in the school community who could provide direct support to the teaching and learning efforts in the classroom. The major thrust of the evaluation was to determine whether teacher aide service had an effect upon pupil achievement as determined by standardized achievement test scores. The achievement of experimental third, fourth, and fifth grade pupils in the reading and arithmetic subtests of the Stanford Achievement Test were compared with comparable pupils who experienced little or no teacher aide service. The findings indicated that fourth grade pupils benefited considerably from exposure to saturated teacher aide service in the areas of both reading and arithmetic, but this was not the case with third and fifth grade pupils. However, as approximately one-third of the total program pupils profited substantially, it is recommended that the project should continue. It is also recommended that principals should be made more administratively cognizant that the essential role of the teacher aide is the improvement of the level of educational achievement in the project area. (MBM)

ED 059973

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS BASED ON THE EVALUATION OF THE GREAT CITIES SCHOOL SERVICE ASSISTANTS PROJECT, TEACHER AIDES COMPONENT

Funded under Title I of the Elementary and Secondary Education Act

1970-71

The documents, tables, and other data supporting the findings of this evaluation are on file and available for examination in the office of the evaluator.

---

by

Nicholas Pendas
Project Evaluator (Title I)

The Research and Development Department
Program Evaluation Section
(Funded under Title I, ESEA)
Detroit Public Schools
November, 1971

SP005-574

GREAT CITIES SCHOOL SERVICE ASSISTANTS PROJECT,[1]
TEACHER AIDES COMPONENT, 1970-71

A Description of the Program

The Teacher Aides component of the Great Cities School Service Assistants Project was intended to improve the level of educational achievement in the project area, in part, through the provision of paraprofessional aides residing in the school community who could provide direct support to the ongoing teaching and learning efforts in the classroom.

This goal was to be accomplished through a concentration of the aides' services in situations which would enable them to engage in regular intensive work with relatively small numbers of Title I students under the overall direction of professional instructional personnel.

In addition to providing teachers with opportunities for more direct teaching time with pupils through the performance of routine instructional tasks, the aides, through sharing a common environment with the pupils, would be additional, supportive, understanding adults with whom young people might relate. Inherent in the above rationale is also the provision of meaningful employment for school community members and also motivation for their personal growth and development.

Teacher aides were assigned to Title I schools on the basis that the aides would spend at least two-thirds of their working day (four hours out of six) engaged in instructional activities under the direction of the teacher. Furthermore, the aides were assigned to work with no more than five classroom teachers in order to ensure continuity of assistance to the children.

---

[1]Funded under Title I of the Elementary and Secondary Education Act.

Emphasis of the 1969-70 Evaluation

The evaluative activities of the previous year (1969-70)[1] of the project's operation were centered upon the effect of the aide services upon the teachers' general relationships with others in the school milieu and upon the teachers' professional functions. A further evaluative concentration was upon the teachers' perceptions of their paraprofessional assistance with respect to the promotion of effective instruction in the classroom and improved services to the school. The influence of the in-service training program, provided for the paraprofessionals, upon their work in the schools and also upon their own career development was dealt with similarly.

It was found, generally, that the aides were considered to have been positive influences upon teacher morale and their professional functions, as well as upon improved instruction and services to the school. The in-service training program was regarded highly by the paraprofessional participants with regard to its value to them in their work in the schools.

Principal deficiencies in the project's operation were perceived to have been a rather thinly-spread distribution of aide service and also the assignment of many teacher aides to non-instructional activities by principals in some schools. These perceived deficiencies have since been alleviated.

Specific Objectives of the Project

In view of the above findings concerning the effect of the teacher aide service upon teacher relationships, the quality of the assistance, and the training program for the aides, a projection of evaluative activity would appear to concern the teacher aides' effect upon pupil achievement.

---

[1] Nicholis Poulos, "Summary, Conclusions, and Recommendations Based on the Evaluation of the Great Cities School Service Assistants Project, Teacher Aides Component," 1969-70. Limited copies of this report are available to interested parties.

Accordingly, the major thrust of the project's evaluation for the 1970-71 school year was geared toward attempting to learn whether teacher aide service will have had an effect upon pupil achievement as determined by standardized achievement test scores.

As a projection, therefore, of the intent and purpose of the program, the specific objectives relative to its evaluation in terms of progress made toward the attainment of its major goal is as follows:

I. Pupils who have had saturated teacher aide service in their classrooms in which instructional activities included reading and arithmetic will perform better on standardized tests than comparable pupils who experienced little or no teacher aide service.

   A. Experimental third, fourth and fifth grade pupils will make greater gains on the reading and arithmetic subtests of the Stanford Achievement Test than comparable pupils who experienced little or no teacher aide service.

Description of the Evaluation Procedures

The following procedures were employed in order to assess the effectiveness of the project in terms of its major goal.

1. Principals from a sample group comprising nineteen Title I Group "A" designated schools provided the evaluator with preliminary information relative to the distribution of teacher aide service in their schools.

2. Research instruments were submitted to homeroom teachers and/or self-contained classroom teachers in order to obtain specific data relative to: (1) total number of hours per week of teacher aide service received by the A. M. or P. M. homeroom sections, and (2) section numbers, grade levels, and names of teacher aides for each respective period. Further information was obtained with regard to whether arithmetic was taught during the homeroom period or in special classrooms.

   The data above were obtained with respect to each of the semesters which comprise the 1970-71 school year.

3. Pupils from homeroom sections in the target grade levels who received a minimum of 15 hours per week of teacher aide service during the periods encompassing reading and arithmetic activities served as the experimental group in the evaluation. In cases where pupils received math instruction in separate classrooms, two hours per week of aide assistance was considered a compatible criterion.

4. The raw score results of the total reading and total arithmetic subtests of experimental and control groups of third, fourth, and fifth grade pupils comprised the data utilized in the analysis. The Stanford Achievement Test batteries were administered to the pupils in May, 1971, as part of a general testing program conducted in ESEA, Title I, schools involving all pupils in grades P1 - 6.

   The control group was composed of a randomly selected and, for the most part, comparable group of pupils who had little or no teacher aide service in their respective classrooms.

5. The mean, standard deviation, and t-test statistical procedures were employed in order to determine significant differences in the results.

Analysis and Findings

The specific objective of the project and the findings based on the procedures for measuring the attainment of this objective are listed and described below:

Objective: Pupils who have had saturated teacher aide service in their classrooms in which instructional activities included reading and arithmetic will perform better on standardized tests than comparable pupils who experienced little or no teacher aide service.

Prior to the procedures entailing data analysis, aptitude stanines were obtained for the experimental and control pupils in order to determine whether the two groups of youngsters were comparable in aptitude. It was determined by means of a t-test that the mean of the aptitude stanines of the third grade control pupils was higher, by a statistically significant margin (.01 level), than that of the pupils comprising the experimental group.

The t-test was similarly employed to determine the aptitude comparableness

of the fourth and fifth grade pupils who were also subjects in the evaluation. It was found that there were no statistically significant differences in the aptitude stanines of the children in the fourth and fifth grades.

In summary, the third graders comprising the control group had considerably higher aptitudes than did the third grade experimental youngsters. The fourth and fifth grade pupils of the experimental and control groups were comparable in aptitude. Therefore, due to the unparalleled aptitude variable regarding the third grade groupings, no effort was made to obtain composite data regarding the pupils at the three grade levels who served as subjects in the evaluative process.

Third Grade Pupils

Reading Results

It was indicated by the data in Table 1 that the mean of the raw scores in reading (50.04) posted by the control pupils was substantially higher than that (40.53) of the experimental pupils. The conversion of the raw score means to grade equivalents based on the Stanford Achievement Test national norms showed that, although both groups of pupils were at least a year below the norms, the mean grade equivalent of the control pupils was three months further advanced (2.9 to 2.6) than the corresponding mean of the program youths.

The t-test indicated that the differences in reading performance among the two groups was statistically significant at the .01 level. This suggested that the pupils comprising the control group performed considerably better on the total reading subtest than did the pupils serving as the experimental group.

However, as noted previously, since a comparative analysis of the mean aptitude stanines showed that the control youngsters had a significantly higher aptitude by an identical (.01 level) statistical margin, it was concluded that

TABLE 1

RESULTS OF STANFORD ACHIEVEMENT TEST READING SUBTESTS
FOR EXPERIMENTAL AND CONTROL GROUPS OF PUPILS

Grade Level	Population Groups								t value
	Experimental				Control				
	N[a]	M	SD	GE	N	M	SD	GE	
3	159	40.53	16.17	2.6	195	50.04	18.32	2.9	5.10**
4	93	33.82	10.19	3.6	114	28.54	7.42	3.2	4.29**
5	119	37.62	13.84	3.8	121	37.69	16.80	3.8	0.04

N[a] = numbers of pupils.
** = significant at .01 level.

there were no basic differences among the third grade experimental and control pupils in respective performance on the SAT reading subtests.

Arithmetic Results

The results concerning the arithmetic subtest totals of the third graders followed a trend similar to the results with respect to reading. The data (Table 2) showed that the mean of the arithmetic raw scores of the program pupils was 41.98, whereas that of the control pupils was 58.75, a substantially higher achievement (.01 level).

A conversion of the raw scores to grade equivalents showed that the control children surpassed the experimental children in arithmetic[1] achievement by a margin of seven months (3.5 to 2.8).

In the interpretation of the findings, a conclusion may be drawn similar

TABLE 2

RESULTS OF STANFORD ACHIEVEMENT TEST ARITHMETIC SUBTESTS FOR EXPERIMENTAL AND CONTROL GROUPS OF PUPILS

Grade Level	Population Groups								t value
	Experimental				Control				
	N[a]	M	SD	GE	N	M	SD	GE	
3	60	41.98	17.91	2.8	48	58.75	18.61	3.5	4.71**
4	93	30.86	9.51	3.6	84	27.99	7.88	3.5	2.16*
5	96	36.01	13.92	4.0	39	36.69	13.84	4.0	0.26

N[a] = numbers of pupils.

** = significant at .01 level.

* = significant at .05 level.

to that concerning the reading phase. Since the test achievement of the experimental and control pupils paralleled their respective aptitudes, it was concluded that the differences in achievement were statistically not significant. Therefore, it was concluded that the objective of the program with respect to the third grade pupils was not achieved.

Fourth Grade Pupils

Reading Results

A comparative analysis of the aptitude stanines of fourth grade pupils comprising the program and control groups in this study indicated that both groups of pupils were representative of the same population with regard to aptitude.

---

[1]It is noted (Table 1 and 2) that the numbers of pupils for whom data were available concerning the arithmetic phase were considerably smaller than those for whom reading data was available. This was due to the unavailability, in many cases, of definitive data relative to the purposes of this study with regard to pupils who received arithmetic instruction in special classrooms.

As seen in Table 1, the test performance mean of the raw scores of the experimental youngsters in reading was 33.82, which by means of the conversion process, represented a grade equivalent of three years and six months (3.6). The mean of raw scores posted by the control youngsters was 28.54 which was converted to a grade equivalent of three years and two months (3.2).

The findings showed, therefore, that the program pupils outperformed the control pupils on the SAT reading subtests by a grade equivalent margin of four months. The application of the t-test to the raw-score means of the two groups indicated that the differences were significant by a substantial statistical margin (.01 level).

Hence, it was concluded that the program youths who experienced saturated teacher aide service during their reading activities performed significantly better on the SAT reading subtests than comparable pupils who received little or no teacher aide service. Therefore, the analysis of the data indicated that the objective, with respect to reading on the part of the fourth graders, was achieved.

Arithmetic Results

The pattern of the test results of the experimental and control youths paralleled, in general, that of the reading activity. The data in Table 2 indicated that a raw score mean of 30.86 was posted by the experimental pupils, whereas a lower raw score mean of 27.99 was attained by the control pupils.

Comparative grade-equivalent data showed that the G. E. of the program youths was three years and six months (3.6), whereupon the G. E. of the control youths was three years and five months (3.5). This indicated a superiority by one month of the experimental over the control children.

The t-tes* indicated that the raw score differences of the two groups of

pupils were statistically significant at the .05 level. Therefore, it was concluded that, paralleling the results of the reading activity, the program youngsters who experienced teacher aide service outperformed their control counterparts by a substantial margin. Hence, the objective of the program with regard to the arithmetic activity (as well as in reading) involving the fourth graders was achieved.

Fifth Grade Pupils

Reading Results

As in the case of the fourth graders, above, it was determined through the employment of the t-test to the aptitude stanines of the experimental and control youths in the fifth grade that the children cited were representative of the same population of youngsters.

The data in Table 1 show that the raw score mean of the experimental youths was 37.62, and that the mean of the control youths was 37.69. It is seen that the SAT results were almost identical. A raw score conversion to grade equivalent showed that the G. E. of each group was three years and eight months (3.8), approximately two years below the national norm.

As surmised, the application of the t-test to the raw score means showed that there were no statistically significant differences in the reading achievement among pupils of the two groups. Accordingly, the project objective with respect to the fifth grade youths in this evaluation was not achieved.

Arithmetic Results

The findings (Table 2) regarding the fifth graders with respect to the SAT arithmetic subtest results were somewhat identical to those manifested in the reading phase of the test. It was indicated by the data that the raw score mean

of the program youths was 36.01, and the raw score mean of the control youths was 36.69. The corresponding grade equivalents of each group of pupils was four years (4.0), well below the national norm of 5.8.

Since the t-test showed that there were no differences of a statistically significant margin in the arithmetic test performance means of the experimental and control groups of pupils, it was concluded that the objective of the program with respect to the fifth graders serving as subjects in this evaluation was not achieved.

Implications of the Evaluation

The listing and description of the findings regarding the experimental and control pupils in the third, fourth, and fifth grades who were subjects in this evaluation indicated that the fourth grade youngsters benefited considerably from exposure to saturated teacher aide service in the areas of both reading and arithmetic.

However, the findings suggested that such was not the case with regard to the third and fifth grade pupils serving as subjects in this study. Consequently, the major objective of the project, based on the procedures used to determine the effectiveness of the program, was found to have been only partially achieved. Inasmuch, however, as approximately one-third of the program pupils were found to have profited substantially from the SCA service in both areas of reading and arithmetic, it is recommended by the evaluator that the project should continue to remain operational.

Supplementing this recommendation is another that principals in schools where teacher aides are employed should be made more administratively cognizant of the essential role of the teacher aides, i.e., the improvement of the level of educational achievement in the project area. This feeling is based on the premise

that in order to fully achieve the goal of the project, all, rather than two-thirds, of the teachers aides' working day should be devoted to activities entailing instruction in the classroom.

* * *